

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 12 JUL 1950

Date of writing Report 2-5-1950 When handed in at Local Office 19... Port of KOBE

No. in Survey held at MAIZURU, JAPAN Date, First Survey 7-4-50 Last Survey 13-5-1950
 Book. (No. of Visits 5)

on the STEEL SINGLE SCREW STEAMER "NICHINAN MARU"
 EAST JAPAN HEAVY IND. LTD. Tons (Gross 5,296.28 Net 2,884.54)

built at YOKOHAMA By whom built YOKOHAMA SHIP YARD Yard No. 5,405 When built 30-7-42

Owners IINO KAIUN K.K. Port belonging to TOKYO

Installation fitted by IINO SANGYO K.K. MAIZURU DOCK YARD When fitted 13-5-50

Vessel equipped for carrying Petroleum in bulk Is vessel equipped with D.F. E.S.D. Gy.C. Sub.Sig. Radar

Plans, have they been submitted and approved System of Distribution 2 wire insul. Voltage of Lighting 105 V

Testing 105V Power 105V D.C. or A.C., Lighting D.C. Power D.C. If A.C. state frequency

Prime Movers, has the governing been found as per Rule when full load is thrown on and off Are turbine emergency governors fitted with a trip switch Generators, are they compound wound and level compounded under working conditions not compound wound state distance between generators and from switchboard Are the generators arranged to run parallel are shunt field regulators provided Is the compound winding connected to the negative or positive pole negative Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule

Position of Generators frame Nos 37-43 starboard side just on the floor in Engine Room

the ventilation in way of generators satisfactory are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil Switchboards, where are main switchboards placed frame Nos. 43-46 starboard side just on the floor in Engine Room.

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water, steam and oil what insulation is used for the panels "NATIONAL-LITE" if of synthetic insulating material is it an Approved Type if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule Is the construction as per Rule, including locking of screws and nuts Description of Main Switchgear for each generator and arrangement of equaliser switches For each generator, a double-pole linked switch, a fuse on each pole and a circuit breaker, is installed, and none of equalising device

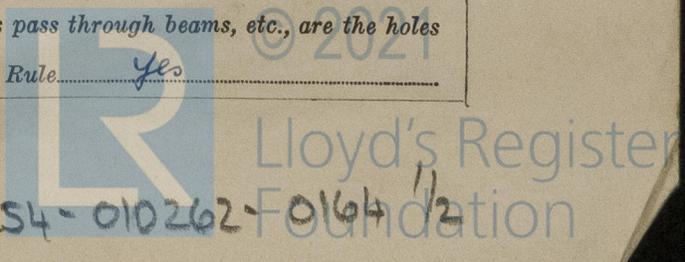
and the switch and fuse gear (or circuit breakers) for each outgoing circuit a fuse on each pole and a double pole linked switch

are compartments containing switchboards composed of fire-resisting material or lined as per Rule Instruments on main switchboard two ammeters two voltmeters and no synchronising devices. For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection Earth Testing, state means provided depending on lamps and these lamps are the metal filament type not more than 15 W. switches, Circuit Breakers and Fuses, are they as per Rule are the fuses an Approved Type make of fuses carbide cartridge are all fuses labelled If circuit breakers are provided for the generators, at what overload do they operate 300-600 A and at what current do the reversed current protective devices operate

Point Boxes, Section Boards and Distribution Boards, is the construction as per Rule are they insulated and protected as per Rule if otherwise than as per Rule are they of an Approved Type state maximum fall of pressure between bus bars and any point under maximum load 5.4 V are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets Are all paper insulated and varnished cambric insulated cables sealed at the ends Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage are any cables laid under machines or floorplates (part) if so, are they adequately protected Are cables in machinery spaces, galleys, laundries, etc., lead covered or run in conduit

of the "HR" type State how the cables are supported or protected the cable run on weather deck are protected by continuous tubes flanged at each end, and other parts are supported by metal clips and protected by metal cover in some spaces where unavoidably exposed to any danger; Lead covered cables are used in Rooms + lead covered + armoured cables are used in other places.

are all lead sheaths, armouring and conduits effectually bonded and earthed Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands where unarmoured cables pass through beams, etc., are the holes effectively bushed Refrigerated chambers, are the cables and fittings as per Rule



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Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes Emergency Supply, state position Batteries are used and compartment for them is located on P. side of upper bridge

Navigation Lamps, are they separately wired Yes controlled by separate double pole switches and fuses Yes Are the switches and fuses a position accessible only to the officers on watch Yes is an automatic indicator fitted Yes Is an alternative supply provided Yes

Secondary Batteries, are they constructed and fitted as per Rule Yes, are they adequately ventilated Yes

state battery capacity in ampere hours 120 A.H.

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yes

Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present Yes if so, how are they protected a lamp in the cargo oil pump room is gas tight compartment

and where are the controlling switches fitted at the alley way on bridge deck Are all fittings suitably ventilated Yes

Searchlight Lamps, No. of 1, whether fixed or portable 1, are they of the carbon arc or of the filament type 1

Heating and Cooking, is the general construction as per Rule Yes, are the frames effectually earthed Yes, are heaters in accommodation of the convection type Yes Motors, are all motors constructed and installed as per Rule and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil Yes

Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the compartment Yes Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing Yes

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule Yes

Control Gear and Resistances, are they constructed and fitted as per Rule Yes Lightning Conductors, where required are they fitted as per Rule Yes Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with Yes, are all fuses of an Approved Cartridge Type Yes, make of fuse clonite cartridge Are the fittings for power rooms, deck spaces, etc., in accordance with the special requirements for such ships Yes Are the cables lead covered as per Rule Yes

E.S.D., if fitted state maker NIPPON DENKI CO. LD. location of transmitter at bottom frame No. 103 and receiver at bottom frame No. 103

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations Yes

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory Yes

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT			Revs. per Min.	TYPE.	PRIME MOVER.	MAKER.
			Kilowatts per Generator.	Volts.	Amps.				
MAIN ...	2	MITSUBISHI DENKI CO. LD.	30	105	285	550	RECIPRO STEAM ENG.	OSAKA HOKI CO. LD.	
EMERGENCY ...									
ROTARY TRANSFORMER									

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	60	2	332.6	285	332	55.7	Rubber	Lead + Armoured
" " EQUALISER ...								
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR GENERATOR...								

MAIN DISTRIBUTION CABLES (to Section Boards, Distribution Fuse Boards, etc.).

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Distribution board for Navigation lights	1	4.516	5.2	24	442.5	Rubber	Lead and Armoured
Charging board	1	4.516	12.0	24	426.0	"	"
Section board 1 (middle part)	1	64.57	68.7	118	426.0	"	"
" " 2 (after part)	1	38.71	65.8	83	82.0	"	"
Switch box for land source.	1	64.57	100.0	118	492	"	"
Distribution fuse board for inspector	1	38.71	35.0	83	426.0	"	"
Switch board for wireless	1	96.77	60.0	152	426.0	"	"
Distribution fuse board for refrigerator	1	96.77	89.2	152	82.0	"	"
" " " oil purifier and working machine	1	14.52	40.0	46	65.6	"	"
" " " HdG	2	4.516	14.8	24	157.5	"	"
Spare line to bridge	1	19.35	5.3	53	393.0	"	"

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Signal light	1	19.35	25.0	53	443	Rubber	Lead + armoured
Lighting, mid part from Dis. board A	3	1.935	3.0	10	788	"	"
" " " " " B	6	"	4.0	"	1410	"	"
" " " " " C	3	"	3.0	"	492	"	"
" fore part " " " F	3	"	2.0	"	296	"	"
" aft part " " " D	9	"	3.3	"	2040	"	"
" " " " " E	6	"	3.0	"	1350	"	Lead
Boiler Room " " " G	5	"	2.4	"	1080	"	Lead + Armoured
Eng. Room " " " H	8	"	2.0	"	788	"	"
Engo lights from Dis. board I	4	"	1.3	"	131	"	"
" " " " " J	2	"	2.0	"	66	"	"
Cabin fans mid part from Dis. board K	3	"	2.3	"	525	"	Lead
" aft part " " " L	3	"	2.3	"	555	"	Lead
" " " " " M	2	"	1.4	"	230	"	"
Navigation lights from indicator	5	"	1.8	"	165	"	Lead + Armoured
Emergency lights mid part from Dis. board O	6	"	1.1	"	950	"	Lead
" aft part " " " P	7	"	1.3	"	1380	"	"
" " Eng. and Boiler rooms from Dis. board Q	2	"	1.3	"	394	"	Lead + Armoured
Cabin fans & lights, inspector room from Dis. board N	3	"	1.6	"	262	"	Lead
Instrument lights from Dis. board	3	"	2.0	"	525	"	Lead + Armoured
Communication from mid part to aft part	31	"	1.0	"	15660	"	"
Batteries, from charging board for Common	2	25.81	12.0	64	135	"	Lead
" for wireless from charge board	6	2.903	3.0	15	405	"	"
" " " " " "	4	1.935	0.1	10	270	"	"
" " " " " "	2	2.903	1.0	15	169	"	Lead + armoured

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Ventilator for Eng. Room	1	2.25	1	9.355	20.0	37	115.0	Rubber	Lead + Armoured
" " Boiler "	1	"	1	"	"	"	131.0	"	"
Tube cleaner	1	2	1	4.516	18.0	24	98.3	"	"
Refrigerator	1	0.5	1	1.935	3.6	10	49.1	"	"
from Distribution board to out station.	1	"	1	64.57	85.8	118	32.8	"	"
" out. station to Refrigerator	2	5	2	19.35	71.5	53	"	"	"
" " " " " "	1	2	1	4.516	14.3	24	39.3	"	"
" Dis. board to oil purifier & working Mach.	1:1	2:3	2	"	10.0	24	65.6	"	"
" " " to motor generator for inspector	2	1.5	2	2.903	10.0	15	147.5	"	"
Heavy oil blower for Range	1	1	1	"	"	"	82.0	"	"
Motor generator for wireless	1	5	1	19.35	40.0	53	68.0	"	"
" " " " " "	1	0.5	1	2.903	4.0	15	"	"	"

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Continuation of main Distribution cables from Sect. board 1 to Dis. board A, B & F	3	6.451	max. 21.1	31	133.0	Rubber	Lead + armoured
" " " " " " C & K	2	2.903	7.6	15	23.0	"	"
" " " " " " I	1	4.516	20.0	24	16.4	"	"
" " " " " " J, I + M	3	1.935	6.8	10	23.0	"	"
" " " " " " E	1	4.516	15.4	24	3.3	"	"
" " " " " " D	1	9.355	30.8	37	13.1	"	"
" charging board " " " O, Q	2	25.810	6.1	64	118.0	"	"
" " " " " " P	1	19.350	8.8	53	360.0	"	"

(Continued)

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.
 All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.
 The foregoing is a correct description.

Electrical Contractors. Date.....

COMPASSES.

Have the compasses been adjusted under working conditions..... *Yes*

Builder's Signature. Date.....

Have the foregoing descriptions and schedules been verified and found correct..... *Yes*

Is this installation a duplicate of a previous case..... *no* If so, state name of vessel..... *✓*

Plans. Are approved plans forwarded herewith..... *no* If not, state date of approval..... *27-4-50*

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith..... *✓*

General Remarks. (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.).....

The electrical installation of this vessel has been examined in accordance with the Rules, approved plans and Secretary's letters for classification.

The workmanship and material were found sound and good. The Generators and equipment etc. have been examined under working condition on full load to Rules' requirements and found satisfactory.

Total Capacity of Generators..... *60* Kilowatts.

The amount of Fee £ *40-0-0* : When applied for, _____ 19 _____
 Travelling Expenses (if any) £ *✓* : : When received, _____ 19 _____

Mr. Lamakura,
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... *FRI. 25 AUG 1950*

Assigned..... *See F.F. mchly rpt.*

2m.9.46.—Transfer. (MADE AND PRINTED IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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